host server that resides somewhere on the Internet. If the CE-505 does not have the objects stored locally, or the object freshness has expired, then the CE-505 retrieves the objects from the host server on the Internet and serves it back to the subscriber. However, the objects are now stored locally to meet future requests for the same objects until their freshness expires.

The CE-505 reduces network latency because URL requests no longer have to traverse the Internet and retrieve the objects from the host server, and it reduces subscriber response time by serving web pages quicker.

Access Node Component Naming Convention

The following table describes the naming convention for the Access Node components.

| Core Node Component | DNS Name |
|---|---|
| Access Node Console Server | acon1.<franchise city name>. ensoport.com |
| Access Node Switch | asw1.<franchise city>.ensoport.com |
| Remote Access Servers | acserv1.<franchise city>.ensoport.com<br>acserv2.<franchise city>.ensoport.com |
| Cache Engine | ace1.<franchise city>.ensoport.com |
| Access Node UPS | aups1.<franchise city>.ensoport.com |

Table 11. Acess Node Component Naming Convention

The Access Node configuration is depicted in Figure 10.

**Services Node Components**

The Services Node is comprised of the following components:

Black Box 40871 Terminal Server (Console Server)
Cisco Catalyst 2924 XL 10/100 Autosensing Fast Ethernet Switch
Cisco CS-50 Content Smart Switch (Load Balancer)
Tatung Model U10/440 Sun Ultra 10 Compatible SPARC Workstations (6)
APC Smart-UPS 3000 RM 3U T

Services Node component descriptions can be found in Appendix A.

**CS-50 Content Smart Switch**

The CS-50 is primarily used to balance service requests from subscribers for ensoServices™ residing on six (6) Tatung workstations in the Services Node. Services are installed on a minimum of two (2) servers, and the CS-50 uses the Cisco proprietary Balance ACA load balancing algorithm, which uses the normalized response time from client to server to determine the load on each server, and then routes the request to the server with the least load.

In the event of a failure to one of the servers, the CS-50 will route all future requests for that service to the next available server with the least load.

The CS-50 also uses "sticky" parameters to ensure that subscribers stay connected to one server once an initial session is established. Stickiness is used to ensure that subscribers stay connected to one mail server during their email session. The stickiness is determined by the Session ID assigned to the subscriber at the time a session is initiated. In the event that the mail server fails, the session will be disconnected, and the subscriber will have to initiate another session, which will be established with one of the remaining operational servers.

**Services Node Servers**

Six (6) Tatung servers are the primary application servers for the ensoBox™. Services such as ensoMail™, ensoWeb™, ensoChat™, ensoNews™, and anonymous FTP run on a minimum of two (2) Tatung servers simultaneously for redundancy. The Cisco CS-50 CSS balances server requests between the six (6) servers based on server load and server availability.

Services Node Component Naming Convention

The following table describes the naming convention for the Services Node components.

| Core Node Component | DNS Name |
|---|---|
| Services Node Console Server | scon1.<franchise city name>. ensoport.com |
| Services Node Switch | ssw1.<franchise city>.ensoport.com |
| Services Node Servers | sfep1.<franchise city>.ensoport.com<br>sfep2.<franchise city>.ensoport.com<br>sfep3.<franchise city>.ensoport.com<br>sfep4.<franchise city>.ensoport.com<br>sfep5.<franchise city>.ensoport.com<br>sfep6.<franchise city>.ensoport.com |
| Services Node UPS | sups1.<franchise city>.ensoport.com |

Table 12. Services Node Component Naming Convention

The Services Node is depicted in Figure 11.

**Conclusion**

From reading this document you should have:

A general understanding of what an ISP Appliance is and how the ensoBox™ meets the criteria for an ISP Appliance.
An overview of the ensoBox™ including its features and services.
An overview of ensoOS™.
An overview of the design of the ensoBox™.
A technical understanding of the ensoBox™ and its configuration.
An understanding of the components of the ensoBox™.
An understanding of how to the ensoBox™ can be classified as an ISP Appliance.

Keep in mind, the hardware/software vendors and models used in this ISP appliance can and will change from time to time. It is the process and integration that is important. It is the overall functionality that must be maintained.